REMARKS

Request for Reconsideration, Informal Matters, Claims Pending

The second non-final Office action mailed on 11 July 2003 has been considered carefully. Reconsideration of the claimed invention in view of the amendments above and the discussion below is respectfully requested.

Claims 1, 3-7, 10-17 and 20-27 are pending.

Response to Rejections Under 35 USC 112, 1st para.

Claims 1 and 15 stand rejected under 35 USC 112, first paragraph, allegedly because the "... first and second transmitter connectable at the same time to the same one of wither the first and second antennas is ... not enabled...." Office Action, 8 January 2004, para. 7.

Claims 10-14, 17, 22 and 23 stand rejected under 35 USC 112, first paragraph, allegedly because "...transmitting or receiving an uncompressed CDMA signal is ... not enabled...." Office Action, 8 January 2004, para. 8.

Discussion of Enablement of Claims 1 & 15

Contrary to the Examiner's assertion, Claims 1 and 15 are fully enabled by the original specification and drawings. The background of the instant specification on page 1, line 21 – page 2, line 8, states as follows with reference to FIG. 1:

> The receiver inputs of the receivers 130, 132 and the transmitter outputs of the transmitters 134, 136 are coupled either to a first antenna 138 or to a second antenna 140, for example by an interface device 142, which may be controlled by the processor 112.

This portion of the disclosure unambiguously supports the limitation that the first and second transmitters may be coupled to the same antenna. One of the objects of the invention is the simultaneous access of multiple communications systems, as discussed in the background of the specification, on page 1, line 21 – page 2, line 8. The detailed description of the specification is replete with disclosure supporting simultaneously accessing multiple communications systems. The unambiguous implication of the specification, when considered in its entirety is that in at least some embodiments, the fist and second transmitters are coupled to the same antenna at the same time. The objection under 35 USC 112, first paragraph is therefore improper and must be withdrawn.

Discussion of Enablement of Claims 10-14, 17, 22 & 23

Contrary to the Examiner's assertion, Claims 10-14, 17, 22 and 23 are fully enabled by the original specification. Compressed and uncompressed W-CDMA communication is known generally to those having ordinary skill in the art. Heretofore, however, continuous WCDMA communications in a multimode handset have not yet been realized. In known multimode WCDM/GSM phones, for example, WCDMA communications must be time compressed to create time for monitoring GSM networks as discussed in the

background of the instant specification on page 1, line 21 – page 2, line 8, as follows:

> Multi-mode and multi-band wireless communications handsets are known, but presently these known devices are incapable of accessing more than one communication system simultaneously. In homogeneous communications systems with sufficient frequency separation, for example, Time Division Multiple Access (TDMA) systems, multi-band communication handsets are capable of efficiently assessing handoff candidates on another frequency. The continuous receive and transmit nature of CDMA communications, however, leaves no time for monitoring other communication systems as required for multi-mode operation, for example for assessing hand-off candidates.
>
> It is known to compress the transmission of downlink and uplink information in continuous receive and transmit communications systems to create time for monitoring other communication systems. During compression, more data is transmitted over shorter time intervals to avoid a reduction in the data rate. Transmission compression however requires more power, resulting in increased burdens on system capacity.

Thus one of the objects of the invention is to permit the simultaneous access of multiple communications systems. In multimode WCDMA and GSM architectures, simultaneous access requires continuous WCDMA operation, heretofore unknown in multimode WCDMA/GSM phones. The exemplary architectures of FIGS. 1 and 2 therefore fully enable continuous operation of GSM and WCDMA in multimode handsets. The objection under 35 USC 112, first paragraph is therefore improper and must be withdrawn.

Allowability of Claims Over Byrne

Rejection Summary

Claim 20 stands rejected under 35 USC 102(e) as being unpatentable over U.S. Patent No. 5,373,703 (Byrne). Official Action, 8 January 2004, para. 9.

Discussion of Patentability of Independent Claim 20

Regarding Claim 20, contrary to the Examiner's assertion, Byrne fails to disclose or suggest a method in a wireless communications device having first and second transceivers, comprising

> ... transmitting a first signal with a first transmitter of the first transceiver operating in a continuous spread spectrum transmission mode,
> the first transmitter coupled to a first antenna;
> receiving a second signal with a second receiver of the second transceiver at the same time the first transmitter is transmitting the first signal,
> the second receiver coupled to a second antenna different than the first antenna.

Byrne discloses a multi-mode communication device that uses GSM cellular and DECT cordless telephone protocols, both of which employ time division duplexing (TDD) implemented by burst mode transmission. Neither GSM nor DECT protocol communications employ "... continuous spread spectrum transmission mode ..." operation. WCDMA is an exemplary spread spectrum modulation format. GSM is a time division format. The

anticipation rejection under 35 USC 102(e) is therefore improper and must be withdrawn. The rejection under 35 USC 102(e) is also improper since Byrne was not issued after the filing date of the instant application. Claim 20 and the claims that depend therefrom are thus patentably distinguished over Byrne.

Allowability of Claims Over Byrne & Vaisanen

Rejeciton Summary

Claims 1, 3, 4, 6 and 7 stand rejected under 35 USC 103 as being unpatentable over Bryne in view of Vaisanen. Office Action, 8 January 2004, para. 10.

Discussion of Patentability of Claim Independent 1

Regarding Claim 1, contrary to the Examiner's assertion, Byrne and Vaisanen fail to disclose or suggest a wireless communications handset, comprising:

> ... a first antenna coupled to the first receiver;
> ... a second antenna coupled to the second receiver,
> the first and second transmitters connectable at the same time to the same one of either of the first and second antennas.

The Examiner admits that Byrne does not disclose a second antenna connected to a second transceiver, but argues that it would have been obvious to connect the second antenna of Vaisanen to the second transceiver of Bryne. In Byrne, however, the first and second transmitters are coupled to the

corresponding first and second antennas. Thus there is no reason to connect the first and second transmitters of Byrne to the same antenna as asserted by the Examiner. The alternative embodiment of Byrne couples the both transceivers to the same antenna. Moreover, in Vaisanen, the Bluetooth (BT) and WLAN transceivers are not coupled to the same antenna at the same time. Vaisanen, col. 7, lines 1-22. There is no suggestion to combine the GSM/DECT cordless phone of Byrne with the multimode Bluetooth/WLAN terminal of Vaisenan. The mere existence in the prior art of individual elements does not suggest the replacement modification asserted by the Examiner. The Examiner's asserted combination lacks the rationale required under 35 USC 103, suggesting strongly that the rejection is based on hindsight reconstruction, which is admonished repeatedly by the Board of Patent Appeals and Interferences. Claim 1 is therefore patentably distinguished over Byrne and Vaisenan.

Discussion of Patentability of Claim 3

Regarding Claim 3, contrary to the Examiner's assertion, Byrne and Vaisanen fail to disclose or suggest a wireless communications handset including "...first and second transmitters disconnectable from the same one of the first and second antennas" in combination with the limitations of Claim 1. Claim 3 is further patentably distinguished over Byrne and Vaisanen.

Discussion of Patentability of Claim 4

Regarding Claim 4, contrary to the Examiner's assertion, Byrna dn Vaisenan do not suggest the wireless communication device of independent Claim 1 wherein, "... the first receiver is a CDMA receiver, the first transmitter is a CDMA transmitter, the second receiver is a TDMA receiver, [and] the second transmitter is a TDMA transmitter." In Vaisanen, the Bluetooth (BT) and WLAN transceivers are not coupled to the same antenna at the same time. Vaisanen, col. 7, lines 1-22. There is no suggestion to combine the GSM/DECT cordless phone of Byrne with the multimode Bluetooth/WLAN terminal of Vaisenan. The mere existence in the prior art of individual elements does not suggest the replacement modification asserted by the Examiner. Claim 4 is thus further patentably distinguished over Vaisanen and Beasley.

Discussion of Patentability of Claim 6

Regarding Claim 6, contrary to the Examiner's assertion, Byrne and Vaisanen fails to disclose or suggest a wireless communications handset including a "... switch coupling the first and second transmitters and the second receiver to the same one of the first and the second antennas" in combination with the limitations of Claim 1. As noted above, Byrne and Vaisanen do not couple both transmitters to the same antenna at the same time. Claim 6 is further patentably distinguished over Vaisanen.

Discussion of Patentability of Claim 7

Regarding Claim 7, contrary to the Examiner's assertion, Byrne and Vaisanen do not suggest the wireless communication device of

independent Claim 1 including "... a processor coupled to the first and second transceivers, a display and input/outputs coupled to the processor." Claim 7 is thus further patentably distinguished over Byrne and Vaisanen.

Allowability of Claims Over Byrne & Poirier

Rejection Summary

Claims 24 and 26 stand rejected under 35 USC 103 as being unpatentable over Bryne in view of U.S. Patent No. 6,341,219 (Poirier). Office Action, 8 January 2004, para. 11.

The Examiner concedes that Byrne "... does not teach receiving at the same time as transmitting...", but alleges that it would have been obvious to "... combine Byrne with the teachings of Poirier et al of receiving at the same time as transmitting to implement an increasingly popular transmission scheme ... with a power control scheme that utilizes a single control signal and provides optimal output power control. Office Action, 8 January 2004, para. 11.

Discussion of Patentability of Independent Claim 24

Regarding Claim 24, contrary to the Examiner's assertion, Byrne and Poirier fail to disclose or suggest a method in a wireless communications device having a first transceiver and a second transceiver, the method comprising

transmitting with a first transmitter of the first transceiver;

transmitting with a second transmitter of the second transceiver at the same time that the first transmitter is transmitting;

receiving with one of a first receiver of the first transceiver and a second receiver of the second transceiver at the same time the first and second transmitters are transmitting.

Contrary to the Examiner's assertion, there is no suggestion to combine the GSM/DECT cordless phone of Byrne with the CDMA power control scheme of Poirier. Byrne discloses providing seamless handover by simultaneously communicating using GSM and DECT transceivers during handover periods. Poirier is concerned with power control in a CDMA handset. As noted previously, prior GSM/WCDMA handset architectures rely upon WCDMA compression to provide time for GSM communications. The Examiner has not cited any support in the prior art for the putative combination. The alleged combination/modification has no relation to the objects of any one of the references cited. Claim 24 and any claims dependent therefrom are thus patentably distinguished over Byrne and Poirier.

Discussion of Patentability of Independent Claim 26

Regarding Claim 26, contrary to the Examiner's assertion, Byrne and Poirier fail to disclose or suggest a method in a method in a wireless communications device having a first transceiver and a second transceiver, the method comprising

receiving with a first receiver of the first transceiver;

receiving with a second receiver of the second transceiver at the same time that the first receiver is receiving;

transmitting with one of a first transmitter of the first transceiver and a second transmitter of the second transceiver at the same time the first and second receivers are receiving.

Contrary to the Examiner's assertion, there is no suggestion to combine the GSM/DECT cordless phone of Byrne with the CDMA power control scheme of Poirier. Byrne discloses providing seamless handover by simultaneously communicating using GSM and DECT transceivers during handover periods. Poirier is concerned with power control in a CDMA handset. As noted previously, prior GSM/WCDMA handset architectures rely upon WCDMA compression to provide time for GSM communications. The Examiner has not cited any support in the prior art for the putative combination. The alleged combination/modification has no relation to the objects of any one of the references cited. Claim 26 and any claims dependent therefrom are thus patentably distinguished over Byrne and Poirier.

Allowability of Claims Over Byrne, Vaisanen & Kitchener

Rejection Summary

Claim 5 stands rejected under 35 USC 103 as being unpatentable over Bryne and Vaisanen in view of U.S. Patent No. 5,995,065 (Kitchener). Office Action, 8 January 2004, para. 12.

Discussion of Patentability of Claim 5

Regarding Claim 5, contrary to the Examiner's assertion, Byrne, Vaisanen and Kitchener do not suggest the wireless communication device of independent Claim 1 wherein "... the first antenna is an internal antenna, the first transmitter coupled to the second antenna, the second antenna is an external antenna." Kitchener does not remedy the deficiencies of Byren and Vaisanen relative to Claim 1 from which Claim 5 is dependent. Claim 5 is thus further patentably distinguished over Byrne, Vaisanen and Kitchener.

Allowability of Claims Over Byrne, Beasley & Wang

Rejection Summary

Claims 10-14 stand rejected under 35 USC 103 as being unpatentable over Byrne in view of Beasley and U.S. Patent No. 6,606,311 (Wang). Office Action, 8 January 2004, para. 13.

Discussion of Patentability of Independent Claim 10

Regarding Claim 10, contrary to the Examiner's assertion, Byrne, Beasley and Wang do not suggest a "... method in a wireless communications device having first and second transceivers ..." comprising

> ... receiving an uncompressed CDMA signal with a first receiver of the first transceiver;
> receiving a second signal with a second receiver of the second transceiver at the same time the first receiver is receiving the uncompressed CDMA signal.

Contrary to the Examiner's contention, there is no suggestion in the Bryne, Beasley or Wang to combine the CDMA cordless phone of Beasley with the multimode phone of Byrne. Byrne discloses seamless handover by simultaneously communicating using GSM and DECT transceivers during handover periods. Wang discloses a quality of service (QOS) framework for CDMA 2000 networks. As noted above, prior GSM/WCDMA handset architectures rely upon WCDMA compression to provide time for GSM communications. The Examiner has not cited any support in the prior art for the putative combination. Claim 10 and the claims that depend therefrom are thus patentably distinguished over Byrne, Beasley and Wang.

Discussion of Patentability of Claim 11

Regarding Claim 11, contrary to the Examiner's assertion, Byrne, Beasley and Wang do not suggest "... receiving the second signal with the second receiver operating in a non-continuous reception mode at the same time the first receiver is receiving the uncompressed CDMA signal" in combination with the limitations of Claim 10. Byrne teaches simultaneous communication using GSM and DECT transceivers that do not receive in continuous reception mode. The mere existence in the prior art of the CDMA protocols disclosed by Beasley and Wang does not suggest replacing the DECT transceiver of Bryne with the CDMA cordless transceiver of Beasley or Wang. Moreover such a combination/modification would not further the objects of any of the references cited. Claim 11 and the claims that depend therefrom are thus further patentable distinguished over the art.

Discussion of Patentability of Claim 12

Regarding Claim 12, contrary to the Examiner's assertion, Byrne, Beasley and Wang do not suggest "... receiving a downlink signal with the GSM receiver at the same time the CDMA receiver is receiving the uncompressed CDMA signal" in combination with the limitations of Claim 10. Byrne discloses GSM and DECT transceivers. The proposed combination/modification would not further the objects of any of the references cited. Claim 12 is thus further patentably distinguished over the art.

Discussion of Patentability of Claim 13

Regarding Claim 13, contrary to the Examiner's assertion, Byrne, Beasley and Wang do not suggest "... the first receiver is CDMA receiver, the second receiver is a TDMA receiver, receiving a downlink signal with the TDMA receiver at the same time the CDMA receiver is receiving the uncompressed CDMA signal" in combination with the limitations of Claim 10. The proposed combination/modification would not further the objects of any of the references cited. Claim 13 is thus further patentably distinguished over the art.

Discussion of Patentability of Claim 14

Regarding Claim 14, contrary to the Examiner's assertion, Byrne, Beasley and Wang do not suggest "... receiving a second uncompressed downlink signal with the second receiver operating in a continuous reception

mode at the same time the first receiver is receiving the uncompressed CDMA signal" in combination with the limitations of Claim 10. The proposed combination/modification would not further the objects of any of the references cited. Claim 14 is thus further patentably distinguished over the art.

Allowability of Claims Over Byrne, Beasley, Wang & Vaisanen

Rejection Summary

Claim 15 stands rejected under 35 USC 103 as being unpatentable over Byrne in view of Beasley, Wang and Vaisanen. Office Action, 8 January 2003, para. 14.

Discussion of Patentability of Claim 15

Regarding Claim 15, contrary to the Examiner's assertion, Byrne, Beasley, Wang and Vaisanen do not suggest, in combination with the method of Claim 10, "... the first receiver coupled to a first antenna, the second receiver coupled to a second antenna different than the first antenna, the first transceiver includes a first transmitter, the second transceiver includes a second transmitter. connecting the first transmitter and the second transmitter to the same one of the first and second antennas at the same time." The proposed combination/modification would not further the objects of any of the references cited. Claim 15 is thus further patentably distinguished over the art.

Allowability of Claims Over Byrne, Vaisanen & Poirier

Rejection Summary

Claim 16 stands rejected under 35 USC 103 as being unpatentable over Byrne in view of Vaisanen and Poirier. Office Action, 8 January 2004, para. 15.

Discussion of Patentability of Independent Claim 16

Regarding Claim 16, contrary to the Examiner's assertion, Byrne, Vaisanen and Poirier do not suggest a method in a wireless communications device having a first transceiver, the method comprising

> receiving a first signal with a first receiver of the first transceiver,
> the first receiver coupled to a first antenna;
> transmitting a second signal with a first transmitter of the first transceiver at the same time the first receiver is receiving the first signal,
> the first transmitter coupled to a second antenna different than the first antenna.

As noted, the GSM and DECT transceivers of Byrne are incapable of receiving and transmitting simultaneously. Also, Byrne discloses the DECT cordless transceiver (220/222) coupled to a first antenna (228) and the GSM cellular transceiver (231/232) coupled to a second antenna (238). However, Byrne does not suggest connecting the receiver of either the GSM or DECT transceiver to one antenna while connecting the transmitter of the same

transceiver to another antenna. The Examiner's reliance on Vainasen is misplaced. Vaisanen does not transmit and receive simultaneously with either of the BT or WLAN transceivers. Vaisanen specifically discloses that the transmitter and receiver of the WLAN transceiver (21) are not connected to the antenna at the same time. Vaisanen, col. 7, lines 55-62. Poirier is concerned with power control in a CDMA handset. The asserted combination/ modification has no relation to the objects of any of the references cited. Claim 16 and the Claims that depend therefrom are thus patentably distinguished over Byrne, Vaisanen and Poirier.

Allowability of Claims Over Byrne, Beasley, Poirier, Wang & Vaisenan

Rejection Summary

Claim 17 stands rejected under 35 USC 103 as being unpatentable over Byrne in view of Vaisanen, Poirier, Beasley and Wang. Office Action, 8 January 2004, para. 16.

Discussion of Patentability of Claim 17

Regarding Claim 17, contrary to the Examiner's assertion, Byrne, Vaisenan, Poirier, Beasley and Wang do not suggest "... receiving the first signal with the first receiver includes receiving an uncompressed CDMA downlink signal" in combination with the limitations of Claim 16. The asserted combination/modification has no relation to the objects of any of the

references cited. Claim 17 is thus further patentably distinguished over the prior art.

Allowability of Claims Over Byrne & Beasley

Rejection Summary

Claim 21 stands rejected under 35 USC 103 as being unpatentable over Byrne in view of Beasley. Office Action, 11 July 2003, para. 17.

Discussion of Patentability of Claim 21

Regarding Claim 21, contrary to the Examiner's assertion, Byrne and Beasley do not suggest the method of Claim 20 wherein "... the first transmitter is CDMA transmitter, the second receiver is a TDMA receiver, transmitting an uplink signal with the CDMA transmitter; receiving the second signal with the TDMA receiver at the same time the CDMA transmitter is transmitting the uplink signal" in combination with the limitations of Claim 20.

Neither Byrne nor Beasley disclose a multi-mode communication device that uses GSM cellular and DECT cordless telephone protocols, both of which employ time division duplexing (TDD) implemented by burst mode transmission. The GSM nor DECT transceivers of Byrne do not employ "... continuous transmission mode ..." operation. The anticipation rejection under 35 USC 102(e) is therefore improper and must be withdrawn. Also, there is no suggestion in the prior art to combine the CDMA cordless phone of Beasley with the multimode deice of Byrne. The asserted combination/modification

has no relation to the objects of any of the references cited. Claim 21 is thus further patentably distinguished over Byrne and Beasley.

Allowability of Claims Over Vaisanen & Byrne

Rejection Summary

Claims 25 and 27 stand rejected under 35 USC 103 as being unpatentable over Byrne, Poirier and Shaffer. Office Action, 8 January 2004, para. 18.

Discussion of Patentability of Claim 25

Regarding Claim 25, contrary to the Examiner's assertion, Byrne, Poirier and Shaffer do not suggest "... receiving includes receiving an uncompressed continuous signal" in combination with the limitations of Claim 24, the allowability of which is discussed above. The use of uncompressed video data in Shaffer is not relevant to transmitting uncompressed CDMA. Shaffer uses compressed video to reduce data size, and there is no reason to combine the CDMA power controller of Poirier with the GSM/DECT handset of Byrne. Moreover, the asserted combination/modification has no relation to the objects of any of the references cited. Claim 25 is thus further patentably distinguished over Byrne and Shaffer.

Discussion of Patentability of Claim 27

Regarding Claim 27, contrary to the Examiner's assertion, Byrne, Poirier and Shaffer do not suggest "... receiving includes receiving an uncompressed continuous signal" in combination with the limitations of Claim 26. The asserted combination/modification has no relation to the objects of any of the references cited. Claim 27 is thus further patentably distinguished over Byrne and Shaffer.

Allowability of Claims Over Byrne & Wang

Rejection Summary

Claims 22 and 23 stand rejected under 35 USC 103 as being unpatentable over Byrne in view of Wang. Office Action, 8 January 2003, para. 19.

Discussion of Patentability of Claim 22

Regarding Claim 22, contrary to the Examiner's assertion, Byrne, and Shaffer do not suggest "... transmitting an uncompressed uplink signal with a first transmitter operating in a continuous transmit mode; receiving the second signal with the second receiver at the same time the first transmitter is transmitting the uncompressed uplink first signal" in combination with the limitations of Claim 20. There is no suggestion to combine the CDMA transceiver Wang with the GSM/DECT device if Byrne. The mere existence in the prior art of the CDMA cordless phone of Beasley does not suggest replacing the DECT transceiver of Bryne with the CDMA cordless transceiver

of Beasley. Claim 22 is thus further patentably distinguished over Byrne and Shaffer.

Discussion of Patentability of Claim 23

Regarding Claim 23, contrary to the Examiner's assertion, Byrne, and Wang do not suggest the method of Claim 20 wherein "... the first transmitter is CDMA transmitter, the second receiver is a TDMA receiver, transmitting an uncompressed uplink signal with the CDMA transmitter; receiving the second signal with the TDMA receiver at the same time the CDMA transmitter is transmitting the uncompressed uplink signal." There is no suggestion to combine the CDMA transceiver Wang with the GSM/DECT device if Byrne. The mere existence in the prior art of the CDMA cordless phone of Beasley does not suggest replacing the DECT transceiver of Bryne with the CDMA cordless transceiver of Beasley. Claim 23 is thus further patentably distinguished over the art.

Prayer For Relief

In view of any amendments and the discussion above, the Claims of the present application are in condition for allowance. Kindly withdraw any rejections and objections and allow this application to issue as a United States Patent without further delay.

LEYH ET AL.
"Multi-Mode Communications Device With Continuous Mode ... "
Atty. Docket No. CS11235

Appl. No. 10/027,650
Confirm. No. 1167
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Respectfully submitted,

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